

## Association for Information Systems AIS Electronic Library (AISeL)

---

AMCIS 2007 Proceedings

Americas Conference on Information Systems  
(AMCIS)

---

December 2007

# Nothing Endures But Change: An Investigation of the Effects of Enterprise Systems Implementation and Business Process Changes on Employees' Work Life

Hillol Bala

*University of Arkansas, Fayetteville*

Follow this and additional works at: <http://aisel.aisnet.org/amcis2007>

---

### Recommended Citation

Bala, Hillol, "Nothing Endures But Change: An Investigation of the Effects of Enterprise Systems Implementation and Business Process Changes on Employees' Work Life" (2007). *AMCIS 2007 Proceedings*. 383.  
<http://aisel.aisnet.org/amcis2007/383>

This material is brought to you by the Americas Conference on Information Systems (AMCIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in AMCIS 2007 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact [elibrary@aisnet.org](mailto:elibrary@aisnet.org).

# NOTHING ENDURES BUT CHANGE: AN INVESTIGATION OF THE EFFECTS OF ENTERPRISE SYSTEMS IMPLEMENTATION AND BUSINESS PROCESS CHANGES ON EMPLOYEES' WORK LIFE

Hillol Bala

Walton College of Business

University of Arkansas

[hbala@walton.uark.edu](mailto:hbala@walton.uark.edu)

## EXTENDED ABSTRACT

*"It is real hard when you are frustrated not to be mad at the whole system...right now I'm so frustrated with it. Like yesterday, I was feeling stupid, inept, inadequate—all of those things! And you know how that makes you feel about your job, you just want to go home and quit..."* (Boudreau and Robey 2005, p. 10)

*"I was really hesitant at first. I think I was afraid. It was very frustrating and I was afraid that the system might actually replace me. I was afraid that I would loose my job."* (Beaudry and Pinsonneault 2005, p. 516)

The academic and practitioner literatures have reported many examples of the effects of enterprise systems (ES)<sup>1</sup> on various facets of employees' work life. Nevertheless, organizations across the world continue to implement complex ES (e.g., ERP systems) to improve organizational performance and gain competitive advantage. Notwithstanding such large investments, failure rates of ES implementation are still alarmingly high (Jasperson et al. 2005; Soh et al. 2000). Both academic and trade press articles have suggested that a key driver to ES implementation failure is inadequate change management during the implementation process, particularly organizations' inability to understand specific nature and magnitude of changes induced by ES and manage how employees react to these changes (Cohen 2005; Jasperson et al. 2005; Markus 2004). A deeper understanding of the exact nature and extent of changes to employees' work life following an ES implementation is an important first step in improving organizational change management practices and subsequently reducing ES implementation failures.

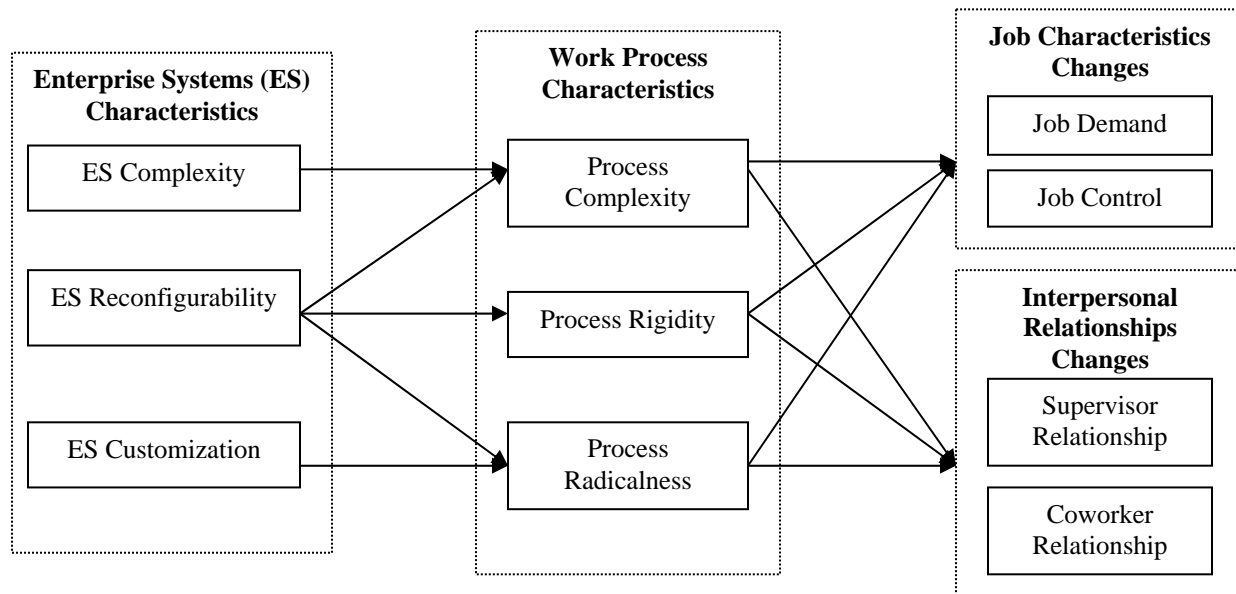
Research on individuals' reactions to new information technology (IT) is broadly one of the most mature streams of research in the information systems (IS) literature. This broad stream of research has made a significant contribution to the IS literature by providing rich insights on various aspects of individuals' reactions to IT. While this research has provided a *broad* understanding of how employees experience changes in their work life following an ES implementation (e.g., Boudreau and Robey 2005; Lapointe and Rivard 2005), research has yet to examine how characteristics of an ES cause changes to *specific* aspects of employees' job and interpersonal relationships, two important facets of employees' work life. This dissertation addresses this gap and focuses on the following research questions: *How is ES implementation associated with changes in employee job characteristics (i.e., job demand, and job control) and interpersonal relationships (i.e., supervisor and coworker relationships)? What are the changes in job characteristics and interpersonal relationships for employees following an ES implementation?*

Figure 1 presents the research model. The model is developed based on affective event theory that suggests that a significant workplace event can cause "a change in circumstances, a change in what one is currently experiencing" (Weiss and Cropanzano 1996, p. 31). Drawing on prior research (e.g., Boudreau and Robey 2005), I suggest that ES implementation is a significant workplace event because it can dramatically change the architecture of an organization's business processes

---

<sup>1</sup> Enterprise systems are software packages that provide seamless integration of all the information flowing through a company across different work-units and business processes (Markus and Tanis 2000).

and/or routines (Markus and Tanis 2000; Soh et al. 2000). Consequently, employees may feel a substantial change in their job characteristics (e.g., increased job demand or decreased job control) and interpersonal relationships (e.g., deteriorated relationship with supervisors and coworkers). Job stress theories (e.g., Cartwright and Cooper 1997) and coping theories (Lazarus and Folkman 1984) also underscore the role of significant workplace events as a driver of changes in employees' work life. In developing the research model, I draw from theories and prior research on ES implementation (e.g., Markus and Tanis 2000), business process changes (e.g., Davenport 1993), and vendor publications (e.g., Anderson 2003). To understand the specific nature of changes in employees' job and relationships, I draw from demands-control model (e.g., Karasek 1979), leader member exchange (e.g., Graen and Uhl-Bien 1995), and team member exchange (e.g., Seers 1989) theories.

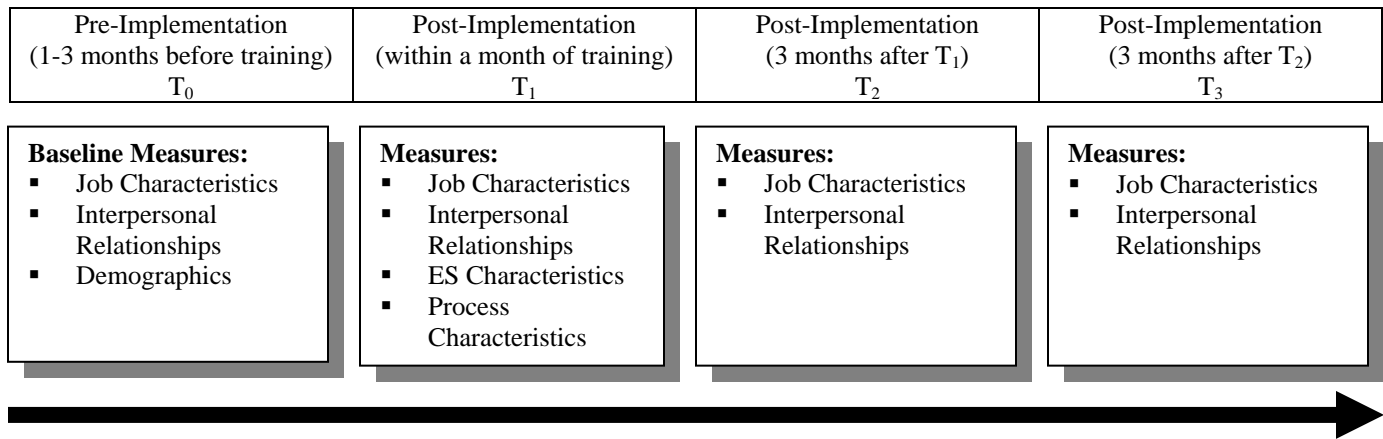


**Figure 1. Model of the Effects of ES Implementation on Employees' Job and Relationship**

The research model posits that ES characteristics, such as *ES complexity* (i.e., an ES is perceived as relatively difficult to understand and use), *ES reconfigurability* (i.e., an ES is perceived to be implemented in such a way that it supports modifications of features and functionalities during the course of use), and *ES customization* (i.e., an ES is perceived to be tailored in such a way that it closely fits with an employee's needs for data, functionality, and outputs), will influence employees' work process<sup>2</sup> characteristics, such as *process complexity* (i.e., a work process is perceived to be difficult to understand and act upon), *process rigidity* (i.e., a work process is perceived to be not modifiable during the course of executing the work process), and *process radicalness* (i.e., perceived newness of a work process). The model further posits that these characteristics will predict changes in employees' job characteristics—i.e., *job demand* (i.e., employees are required to work fast and hard and have much work to do in a short time, or have a great deal of work to do after an ES implementation) and *job control* (i.e., employees' perception of being able to exert some influence over their work environment after an ES implementation)—and interpersonal relationships—i.e., *supervisor relationship* (i.e., perceived changes in the pattern of relationship with supervisors after an ES implementation), and *coworker relationship* (i.e., perceived changes in the pattern of relationship with coworkers after an ES implementation). Due to space constraints, a detailed discussion of the constructs and the relationships is not provided here.

A longitudinal field study will be conducted to test the research model. Figure 2 presents the proposed research design. The longitudinal data collection will help capture employees' perceptions of ES and work process characteristics immediately after ES implementation and their perceptions of changes to their job and relationships after a few months of system use (i.e., 3 and 6 months). This design will also reduce the potential for common method variance. The appropriate research sites will be organizations implementing cross-functional ES. Three large organizations—a telecommunication firm, a national bank, and a protein-based food production company—have already agreed to participate in the study. The study is expected to span about 9 months including data collection at four periods of time (see Figure 2). Validated scales will be adapted from prior research where available. For the new constructs, measures will be developed and validated following the guidelines of DeVellis (2003). Data analysis will be conducted with AMOS 6.0, which is a covariance-based structural equation modeling tool.

<sup>2</sup> ES implementation is often associated with radical changes in organizational business processes. At the individual level, prior research has suggested that ES implementation will have a substantial influence on employees' *work processes* (Soh et al. 2000). A work process is defined as a set of interrelated and sequential activities or tasks bounded by certain rules that an employee performs as a part of his or her job.



**Figure 2. Proposed Research Design**

This dissertation is expected to make important contributions to and have implications for research and practice. First, it provides a deep understanding of how ES implementation leads to various changes in employees' job characteristics and interpersonal relationships. While prior research has broadly suggested that employees will experience changes in their work life following an ES implementation, an in-depth theory-driven investigation such as the one proposed in this dissertation is required to understand the nature and extent of such changes. Second, the research introduces the concept of work process characteristics which are theorized as proximal determinants of changes in job characteristics and interpersonal relationships. Finally, an understanding of how ES and work process characteristics lead to changes in employees' work life can help managers develop effective interventions to minimize negative effects of these changes and maximize positive use of ES in organizations.

## REFERENCES

- Anderson, G. W. *SAP Planning: Best Practices in Implementation*, Indianapolis, IN: Sams Publishing, 2003.
- Beaudry, A., and Pinsonneault, A. "Understanding User Responses to Information Technology: A Coping Model of User Adaptation," *MIS Quarterly* (29:3), 2005, pp. 493-525.
- Boudreau, M., and Robey, D. "Enacting Integrated Information Technology: A Human Agency Perspective," *Organization Science* (16:1), 2005, pp. 3-18.
- Cartwright, S. and Cooper, C. L. *Managing Workplace Stress*, Thousand Oaks, CA: Sage, 1997.
- Cohen, D. S. "Why Change is an Affair of the Heart," *CIO Magazine* (December 1, 2005), 2005.
- Davenport, T. H. *Process Innovation*, Boston, MA: Harvard Business Press, 1993.
- DeVellis, R. F. *Scale Development: Theory and Applications*, Thousand Oaks, CA: Sage, 2003.
- Graen, G. B., and Uhl-Bien, M. "Development of Leader-member Exchange (LMX) Theory of Leadership over 25 Years: Applying a Multi-level Multi-domain Perspective," *Leadership Quarterly* (6:2), 1995, pp. 219-247.
- Jaspersen, J., Carter, P. E., and Zmud, R. W. "A Comprehensive Conceptualization of the Post-adoptive Behaviors Associated with IT-enabled Work Systems," *MIS Quarterly* (29:3), 2005, pp. 525-557.
- Karasek, R. A. "Job Demands, Job Decision Latitude, and Mental Strain: Implications for Job Redesign," *Administrative Science Quarterly* (24:2), 1979, pp. 285-311.
- Lapointe, L., and Rivard, S. "A Multilevel Model of Resistance to Information Technology Implementation," *MIS Quarterly*, (29:3), 2005, pp. 461-491.
- Lazarus, R. S., and Folkman, S. *Stress, Appraisal, and Coping*. New York: Springer Pub. Company, 1984.

- Markus, M. L. "Technochange Management: Using IT to Drive Organizational Change," *Journal of Information Technology* (19:1), 2004, pp. 3-19.
- Markus, M. L., and Tanis, C. "The Enterprise System Experience: From Adoption to Success," In R. W. Zmud (ed.), *Framing the Domains of IT Management*. Pinnaflex Edu. Res., Cincinnati, OH, 2000, pp. 173-207.
- Seers, A., "Team-member Exchange Quality: A New Construct for Role-making Research," *Organizational Behavior and Human Decision Processes* (43:1), 1989, pp. 118-135.
- Soh, C., Kien, S. S., and Tay-Yap, J. "Cultural Fits and Misfits: Is ERP a Universal Solution," *Communication of the ACM* (43:4), 2000, pp. 47-51.
- Weiss, H. M., and Cropanzano, R. "Affective Events Theory: A Theoretical Discussion of the Structure, Causes and Consequences of Affective Experiences at Work," In B. M. Staw and L. L. Cummings (eds.), *Research in Organizational Behavior* (19), Greenwich, CT: JAI Press, 1996, pp. 1-74.